To: Osborn, Mark[mark.osborn@dnr.mo.gov]

From: Angelo, Robert

Sent: Mon 7/18/2016 12:47:11 PM

Subject: RE: Attached maps and spreadsheet

Thanks, Mark. R7 will try to develop a revised list of affected lakes by removing all lakes (a) located within the BRF Ecoregion (per the revised shapefile you provided), (b) comprising less than 10 acres or (c) appearing in Table M. Before sharing that list with HQ, I'll run it by you and ask for your feedback. All of this probably will occur sometime next week, when the GIS person I'm working with returns from vacation. We may not end up with exactly 1,037 affected lakes, but hopefully our final count will be very close to that number. -- Bob

From: Osborn, Mark [mailto:mark.osborn@dnr.mo.gov]

Sent: Friday, July 15, 2016 3:38 PM

To: Angelo, Robert <angelo.bob@epa.gov> **Subject:** RE: Attached maps and spreadsheet

Bob, The attached shapefile lists 1,023 lakes. It excludes lakes in the Big River region and those less than 10 acres. It is also missing several biggies, namely Lake of the Ozarks, Table Rock, Bull Shoals and Truman. So this doesn't account for all 1,037 affected lakes that I originally listed. The shapefile that I used to derive that seems to have vanished in the ether. However, I went through the named lakes in your spreadsheet and noted fourteen not listed. They are in the attached Excel file. I imagine the other missing entries are among the numerous unnamed lakes, I had no way of distinguishing them. I realize this may not be quite satisfactory, but I hope it helps.

Mark Osborn

Environmental Specialist

Missouri Dept of Natural Resources

(573)522-2019

mark.osborn@dnr.mo.gov

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From: Angelo, Robert [mailto:angelo.bob@epa.gov]

Sent: Monday, July 11, 2016 9:13 AM

To: Osborn, Mark

Subject: Attached maps and spreadsheet

Hi Mark. I've attached two maps and a spreadsheet for your consideration. The first map depicts the location of all classified lakes in MO based on MUDD, version 1.0. The second map attempts to show only those lakes affected by the state's draft revised chl-a criteria and TP/TN impairment screening thresholds. The spreadsheet lists all lakes included in the second map. Ecoregion boundaries depicted in both maps are based on the shapefile you shared on June 8.

The first map captures 3,081 lakes, whereas the second captures 1,002 lakes. However, MDNR's 2015 NNC rationale (Table 1) refers to 1,037 affected lakes. Would you be able to tell me which lakes are missing from the attached spreadsheet? Alternatively, would you be able to provide a shapefile or spreadsheet identifying those lakes subject to the state's proposed chl-*a* criteria and TP/TN impairment screening thresholds?

Thanks in advance for any information or insight you may be able to provide. If it would save time/effort to discuss any of this by phone, feel free to give me a call. I'll be in the office all week, except for Wednesday, when I'll be attending the MCWC meeting in Jeff City. – Bob

Robert T. Angelo, Ph.D.

Environmental Scientist

USEPA Region 7

11201 Renner Road

Lenexa, KS 66219

(913) 551-7060

